



Managing for Today's Cattle Market and Beyond

Assessing the Economic Status of Your Beef Cow Herd

By
Harlan Hughes, North Dakota State University
Tim Cross, University of Tennessee
Lee Meyer, University of Kentucky

Introduction

The typical 9-11 year cattle cycle brings on a 9-11 year beef price cycle. Northern Plains Farm Business Management Record Summaries for the last beef price cycle show considerable similarities between the last and the current beef price cycles. The downside of the current beef price cycle is having a large impact on beef cow profits and is very similar to the 1979-1982 downside of the last beef price cycle.

These same Northern Plains Farm Business Management Summaries document that beef cow operators earned a minus \$28 average return per beef cow in 1995 for unpaid family and operator labor, management and equity capital.¹ This is in contrast to a positive \$49 average earned returns per cow in 1994 and a positive \$178 average earned returns in 1993. The economic situation for all beef farmers and ranchers should be similar across the U.S. and Canada. The last beef price cycle took 6 years before

cattle prices again turned upward. The current beef price cycle low is projected to last at least 4 years (1994 through 1997).

Table 1 presents Cattle Fax data on the profitability of their member beef cow operators. This table suggests that profitability problems started increasing in 1994 and accelerated in 1995 with 79 percent of Cattle Fax's beef cow producers near break-even or not profitable. In 1995, 36 percent of their members reported not being profitable. As the current beef price cycle continues its projected 4-year low, additional beef cow producers will experience severe economic stress.

Now Is The Time

Now is the time for all beef farmers and ranchers to become proactive and to implement a special management action plan for "coping with the current down market." This is not the time to continue things as usual. Northern Plains data suggests that 80 percent of all beef operators studied have some room for improving economic efficiency. Twenty percent of the herds studied have considerable room for improving economic efficiency. This is based on what the top 20 percent of the herds are currently doing. The high profit 20 percent of the herds netted \$65 per cow with their 1995 calves. This is \$200 more than the lowest 20 percent of the herds who averaged a loss of \$144 per cow. Yes, management does make a

Table 1: Cow-Calf Producer Profitability

	1993	1994	1995
Profitable	72%	46%	21%
Near Break-even	22%	39%	43%
Not Profitable	6%	15%	36%
Source: Cattle-Fax			

difference.

The key to coping with today's down cattle market is to remember that beef prices go in cycles. The beef price cycle will once again turn upward and cattle prices will go back up. Your management energies should be directed towards executing a specific management action plan designed to take you through the current tough times into the new good times. Without a specific action plan, some beef farmers and ranchers may not make it through the current price lows.

This introductory fact sheet and the related fact sheets in this series describe a specific set of recommended management actions that beef farmers and ranchers can take to assess their situations and then suggests potential management actions that can be taken to minimize economic stress during these tough times.

Recommended Special Management Actions

The very first management action that any beef farmer or rancher should take in coping with a down market, is to assess his farm or ranch total business situation. There are several performance indicators that can be used to evaluate the production and financial performance of your farm or ranch business. A few key performance indicators are highlighted in this fact sheet to serve as sign posts or benchmarks for financial performance of a farm or ranch business. A beef farmer or rancher should first look at his cash flow and equity situation, second, he should look at his long-run solvency situation, third, he should determine if he is a high cost or a low cost producer, and fourth, he should evaluate his herd's production efficiency.

This series of fact sheets were written to take beef farmers and ranchers step-by-step through the process by describing the indicators, showing them why these management actions are worth the effort to measure and giving examples of how beef farmers and ranchers can use them. These performance indicators are all a part of the recommended management process for coping with a down market.

The Starting Point

There are three "red flags" to watch for in a down market. The first is a negative cash flow of the cow-calf enterprise. The two other "red flags" are negative economic profits and negative financial returns from

the beef cow profit center.

The cash flow analysis is based on direct cash costs of the cowherd including 1) growing farm-raised feed for the cows, 2) grazing the cows, 3) serving debt (interest and principal payments) and 4) drawing family living from the beef cow herd profit center. Depreciation on cows and equipment is not a cash cost and it is not considered in the cash flow analysis. Every beef farmer and ranchers has to cash flow each and every year. If they do not cash flow, they are in talking to their banker about some changes.

The economic analysis is based on farm-raised feeds priced to the beef cows at fair market value (opportunity costs), assets valued at market value, actual interest paid on borrowed money and non-cash depreciation. Principal payments, on the other hand, are not part of the economic costs. A beef farmer or rancher does not need to be profitable each and every year. Negative economic returns implies that the cows can not pay market price for farm raised and/or purchased feeds. In some cases, this is not extremely serious. Negative beef cow profits has the potential to quickly snowball into a major total business problem. A negative economic profit does send up a "red flag" that needs management attention.

The financial or accounting analysis is based on the actual costs of producing farm-raised feeds, actual cost of pastures grazed, assets valued at book value (costs minus depreciation taken to date) and actual interest paid on borrowed money. A negative financial analysis implies that equity capital is being consumed. This is serious and must be immediately turned around or the total business may fail quickly.

Three Total Business Indicators

While this fact sheet series is focusing primarily on the beef cow profit center, total net farm or ranch equity should also be considered as an indicator of the overall total business' ability to weather a down market. Three total business economic indicators — 1) liquidity, 2) solvency, and 3) cost structure are discussed below. These problem indicators are presented to help beef farmers and ranchers determine the severity of the problem for their farm or ranch business. Beef farmers and ranchers are encouraged to use the table in this fact sheet, along with their own business records, to do their own self-assessment.

1. Liquidity (also known as cash flow)

Liquidity refers to a farm's or ranch's ability to meet cash expenses and cash payments as they occur and provide for unexpected events. Cash expenses and

payments include items which will be paid within a given time period (usually the next 12 months). The decrease in cattle prices has quickly led to liquidity problems for many beef farmer and ranch operators.

Not meeting short-term cash obligations can seriously jeopardize a farmer's or rancher's ability to survive. Creditors may refuse to extend credit to an operation that cannot keep its bills current, suppliers may refuse to deliver products to farms with past-due accounts, and lack of cash for living expenses can quickly lead to family stress.

Two measures are commonly used to analyze liquidity. You can calculate a current ratio by dividing the value of your total current assets by your total current liabilities. Current assets are those items you own which are easily converted to cash with low transactions costs (e.g., raised livestock, checking accounts, C.D.'s, accounts receivable within a year, etc.). Current liabilities include scheduled payments on loans, accounts payable, and other obligations due within a year.

A large current ratio is desired. Current ratios greater than 2.0 suggest that opportunities for additional business investment may be feasible. This rancher could consider expanding his cow herd while breeding cow prices are relatively low. A current ratio between 1.0 and 2.0 suggests caution be exercised in managing cash and probably no herd expansion. A current ratio less than 1.0 indicates potential liquidity problems that may only be solved by liquidating some breeding cows.

Another useful measure of liquidity is annual net cash flow, calculated as projected annual cash inflows minus annual cash outflows. This measure encompasses all expected sources and uses of cash over the next twelve months, and can be used to anticipate liquidity problems before they occur. A monthly projected cash flow can also be constructed to calculate net cash flow by the month, and this statement can also be used to determine operating capital borrowing needs and repayment abilities from month to month.

A projected large negative net cash flow value is an indication of serious liquidity problems. Overcoming this cash shortfall may require additional borrowing, sales of assets, or postponement of scheduled payments. Beef cow producers have one typical advantage over other types for farmers. They can normally sell off breeding cows to generate cash when needed.² Most of these solutions entail significant costs that may be detrimental to the long-run health of farms. A small negative or small positive net cash flow should be interpreted as a warning that margins for

error are small. Management changes that produce incremental increases in revenues and/or cost savings may help to provide additional cash flow.

2. Solvency

While liquidity is concerned with the short-run ability of a farm to meet its obligations, solvency examines its long-run financial stability. If the farm or ranch was sold today, would the total value of the farm's or ranch's assets retire all the outstanding farm debt? This is the primary question that a solvency analysis should answer. Solvency problems may not manifest themselves as quickly as liquidity problems, but their consequences can be more serious. In fact, liquidity problems often turn into solvency problems, especially when long-term assets are liquidated to cover current liabilities.

One measure of solvency is the debt to asset ratio. This is calculated as the total outstanding debt on the farm or ranch divided by the total value of all farm assets. It estimates the percentage of the farm which is debt-financed. For example, an operation with a debt of \$150,000 and assets valued at \$225,000 would have a debt to asset ratio of 67% ($\$150,000 \div \$225,000$), and would be at considerable financial risk. An operation with the same debt but with \$450,000 of assets would have a debt to asset ratio of 33%. Both operations are solvent because debt is less than asset value. A lower debt to equity ratio indicates greater solvency and a greater ability to withstand short-term operating losses. Debt to asset ratios of about 60 percent suggest that serious attention is required during periods of low prices and incomes. Ratios from 40 to 60 percent are acceptable, but in beef operation, more so than for other types of farms, debt loads should be closely monitored to insure that progress is being made toward reducing the ratio over time.³ Ratios less than 40 percent show reasonably good potential for long-run financial health.

Net worth is another good measure of solvency. Calculated as total assets minus total liabilities, it shows the owner's equity capital in the farm or ranch. Net worth is increased by 1) generating profits, 2) appreciating asset values over time and, 3) debts being retired. Farms with small net worth values are less able to withstand financial losses compared to similar farms with large net worth values.

A related solvency measure is change in net worth from year to year. This measure is calculated by subtracting last year's value of net worth from this year's value of net worth. A large negative change in net worth is a "red flag" signal that all is not well on the farm, and the value of the owner's equity capital is

declining. A large negative change in net worth is serious and needs immediate attention.

3. Cost Structure and Profitability

Cattle production costs are not directly tied to cattle prices, so cost may be unchanged even though revenues decreased substantially. For many producers, the cattle enterprise will not be profitable. Low unit cost herds can survive the current down market. High unit cost herds are at risk of having to sell out. Your ability to cope with today's down market will depend on your herd's unit cost of producing a hundred weight of calf. You absolutely have to know if you are a high cost or low cost producer. Other fact sheets go into detail about measuring your unit cost of production and comparing it with benchmark herds.

4. Putting It All Together

An examination of the problem indicators can help direct your management efforts in these tough times (see Table 2). First, examine the serious problem column. Any problem area that has two or more serious problem values circled should be addressed immediately. Problem areas with one serious problem measure should be evaluated soon afterwards. Next, examine those problem areas that have more than one caution measure circled. These are areas that have room for improvement, and if addressed now should improve your long-run performance and long-run survival. Last, look at each problem area where you've circled more than one value that is not a problem. Pat yourself on the back and try to capitalize on these strengths.

Table 2: Problem Indicator Summary

Problem Area	Measures	Not A Problem	Caution	Serious Problem
Liquidity	Current Ratio	>2.0	1.0 - 2.0	<1.0
	Net Cash Flow	Large Positive	Small	Large Negative
Solvency	Debt to Asset Ratio	<40%	40% - 60%	>60%
	Net Worth	Large	Moderate	Small
	Change in Net Worth	Positive	Small	Large Negative

You now know if liquidity and/or solvency are "red flags" for you. How quickly these red flags show up in your beef cow business during the down side of the current beef price cycle depends on (1) the productivity of your beef cow herd,(2) your cost control program, and (3) the debt structure associated with your beef cow herd. You now need to formulate a management action a plan for removing any "red flags" that you've identified.

Summary

If a rancher is serious about what to do in these tough times, he must first replace perceptions with his business's facts and second be receptive to making modifications in his business. This fact sheet goes into 3 business analyses recommend for these tough times. He does this by collecting and analyzing the "facts" on his own business. When he collects and analyzes his own business facts, he will leave perceptions behind and go to reality.

Finally, a rancher's state Cooperative Extension Service, his state's IRM Team, and his own local learning team can help him with 1) the collection and analysis of his herd's production and economic facts and 2) the formulation of a management action plan tailored to his herd's unique production and economic facts. The collective efforts of these professionals should help any beef farmer or rancher identify opportunities for increasing his herd's profits. Beef farmers and ranchers are encouraged to use the services of these professionals to help them through these tough times. Dollar calves are again coming and farmers and ranchers need to use all of the management tools available today so they can take advantage of higher calf prices tomorrow.

¹ Source: North Dakota's 1995 Farm Business Management Summary, Department of Agricultural Economics, North Dakota State University, Fargo, North Dakota.

² It is the collective sell off of breeding cows in times of low prices that typically causes the cattle cycle numbers to turn back down. This cattle number turn-down is triggered by selling breeding animals for cash which, in turn, facilitates the turn up in beef cattle prices. Now as prices are going up, these same producers are holding back more heifer calves rather than selling them for the higher calf prices. This is what causes cattle cycles.

³ North Dakota's simulation research on beef operations in the 1980s tended to loss all equity through a beef price cycle if the initial debt to asset ratio was above 40 percent. This suggested, at least to us, that beef operations may be more sensitive to debt to asset ratios than other type of commercial agricultural businesses.